

WHAT IS CLAIMED IS:

CLAIMS

1. A device in a wireless communication system, comprising:
a buffer operative to receive a sufficient number of data blocks needed to recover a message sent on a control channel, wherein the sufficient number of data blocks is less than a total number of data blocks generated and transmitted for the message;
a decoder operative to decode the received data blocks to recover the message;
and
a controller operative to terminate the decoding for the message, without receiving all of the total number of data blocks, if the message is decoded correctly.
2. The device of claim 1, wherein if the message is decoded in error, the buffer is operative to receive a next data block for the message, and the decoder is operative to decode all of the received data blocks to recover the message.
3. The device of claim 1, wherein until the message is decoded correctly or all of the total number of data blocks have been received and decoded, the buffer is operative to receive a next data block for the message, and the decoder is operative to decode all of the received data blocks to recover the message.
4. The device of claim 3, wherein the buffer is operative to provide a block of erasures for each data block not received among the total number of data blocks, and wherein the decoder is operative to decode the received data blocks and blocks of erasures for data blocks not received.
5. The device of claim 1, wherein the sufficient number of data blocks is equal to a minimum number of data blocks required to decode the message.

6. The device of claim 1, wherein the controller is further operative to initiate a transition to a sleep state after the message has been decoded correctly.

7. The device of claim 1, wherein the control channel is a paging channel.

8. The device of claim 1, wherein the control channel is a broadcast control channel.

9. The device of claim 1, wherein the wireless communication system is a Global System for Mobile Communications (GSM) communication system.

10. The device of claim 1, wherein the wireless communication system is a Code Division Multiple Access (CDMA) communication system.

11. A method of performing early decoding for a control channel in a wireless communication system, comprising:

receiving a sufficient number of data blocks needed to recover a message sent on the control channel, wherein the sufficient number of data blocks is less than a total number of data blocks generated and transmitted for the message;

decoding the received data blocks to recover the message; and

terminating the decoding for the message, without receiving all of the total number of data blocks, if the message is decoded correctly.

12. The method of claim 11, further comprising:

if the message is decoded in error,

receiving a next data block for the message, and

decoding all of the received data blocks to recover the message.

13. The method of claim 12, further comprising:

repeating the receiving a next data block and the decoding all of the received data blocks until the message is decoded correctly or all of the total number of data blocks have been received and decoded.

14. The method of claim 11, further comprising:
entering a sleep state upon decoding the message correctly.

15. An apparatus in a wireless communication system, comprising:
means for receiving a sufficient number of data blocks needed to recover a message sent on a control channel, wherein the sufficient number of data blocks is less than a total number of data blocks generated and transmitted for the message;
means for decoding the received data blocks to recover the message; and
means for terminating the decoding for the message, without receiving all of the total number of data blocks, if the message is decoded correctly.

16. A memory communicatively coupled to a digital signal processing device (DSPD) capable of interpreting digital information to:
receive a sufficient number of data blocks needed to recover a message sent on a control channel in a wireless communication system, wherein the sufficient number of data blocks is less than a total number of data blocks generated and transmitted for the message;
decode the received data blocks to recover the message; and
terminate the decoding for the message, without receiving all of the total number of data blocks, if the message is decoded correctly.

17. A device in a Global System for Mobile Communications (GSM) communication system, comprising:
a buffer operative to receive first and second bursts of data for a message sent on a control channel, wherein four bursts of data are transmitted for the message;
a decoder operative to decode the first and second bursts of data to recover the message; and
a controller operative to terminate the decoding for the message, without receiving all four bursts of data, if the message is decoded correctly.

18. The device of claim 17, wherein if the message is decoded in error with the first and second bursts of data,

the buffer is operative to receive a third burst of data for the message, and

the decoder is operative to decode the first, second, and third bursts of data to recover the message.

19. The device of claim 18, wherein if the message is decoded in error with the first, second, and third bursts of data,

the buffer is operative to receive a fourth burst of data for the message, and

the decoder is operative to decode the first, second, third, and fourth bursts of data to recover the message.

20. The device of claim 17, wherein the controller is further operative to initiate a transition to a sleep state after the message has been decoded correctly.

21. The device of claim 17, wherein the buffer is operative to provide a burst of erasures for each burst of data not received among the four bursts of data, and wherein the decoder is operative to decode received bursts of data and bursts of erasures for bursts of data not received.

22. The device of claim 17, wherein the control channel is a paging channel (PCH) in GSM.

23. The device of claim 17, wherein the control channel is a broadcast control channel (BCCH) in GSM.

24. A method of performing early decoding for a control channel in a Global System for Mobile Communications (GSM) communication system, comprising:

receiving first and second bursts of data for a message sent on the control channel, wherein four bursts of data are transmitted for the message;

decoding the first and second bursts of data to recover the message; and

terminating the decoding for the message, without receiving all four bursts of data, if the message is decoded correctly.

25. The method of claim 24, further comprising:
if the message is decoded in error with the first and second bursts of data,
receiving a third burst of data for the message, and
decoding the first, second, and third bursts of data to recover the message.

26. The method of claim 25, further comprising:
if the message is decoded in error with the first, second, and third bursts of data,
receiving a fourth burst of data for the message, and
decoding the first, second, third, and fourth bursts of data to recover the message.

27. An apparatus in a wireless communication system, comprising:
means for receiving first and second bursts of data for a message sent on a control channel, wherein four bursts of data are transmitted for the message;
means for decoding the first and second bursts of data to recover the message;
and
means for terminating the decoding for the message, without receiving all four bursts of data, if the message is decoded correctly.